

STACKED PIEZOELECTRIC DEVICE
AND METHOD OF FABRICATING SAME

5

ABSTRACT OF THE DISCLOSURE

10 To provide a stacked piezoelectric device which is
inexpensive and excellent in bonding strength between a
piezoelectric layer and an internal electrode layer, the
piezoelectric device comprises piezoelectric layers and
internal electrode layers containing not less than 50
percent by weight of Cu stacked alternately. Between the
15 internal electrode layer and the piezoelectric layer,
there is a diffusion region formed by mutual diffusion of
components of the internal electrode layer and the
piezoelectric layer to the other layer and comprising at
least one component of the piezoelectric material and Cu.
20 The diffusion region occupies not less than 90 percent of
area of interface between the internal electrode layer
and the piezoelectric layer, and a thickness of the
diffusion region is not more than 10 percent of a
thickness of the internal electrode layer. A
25 piezoelectric material constituting the piezoelectric
layer preferably comprises PZT which is a $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ -
based oxide having a perovskite structure, and Pb, Cu,
and O elements coexist in the diffusion region.